

A NEW *TYPHLODROMUS* FROM JAPAN WITH NOTES ON FOUR OTHER SPECIES OF PHYTOSEIID MITES¹⁾

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Synopsis

EHARA, Shôzô and Keiko HAMAOKA (Biological Institute, Faculty of Education, Tottori University, Tottori 680, Japan) : A New *Typhlodromus* from Japan with notes on four other species of phytoseiid mites. *Acta Arachnol.*, **29**: 3-8 (1980).

Typhlodromus (Paraseiulus) yokogawae EHARA et HAMAOKA, n. sp. is described from Tottori Prefecture, Honshu. This is the first record of the subgenus *Paraseiulus* MUMA from Japan. *Typhlodromus (Anthoseius) insularis* EHARA, *Amblyseius (Amblyseius) makuwa* EHARA, *A. (A.) okinawanus* EHARA, and *Okiseius subtropicus* EHARA are recorded from Honshu for the first time.

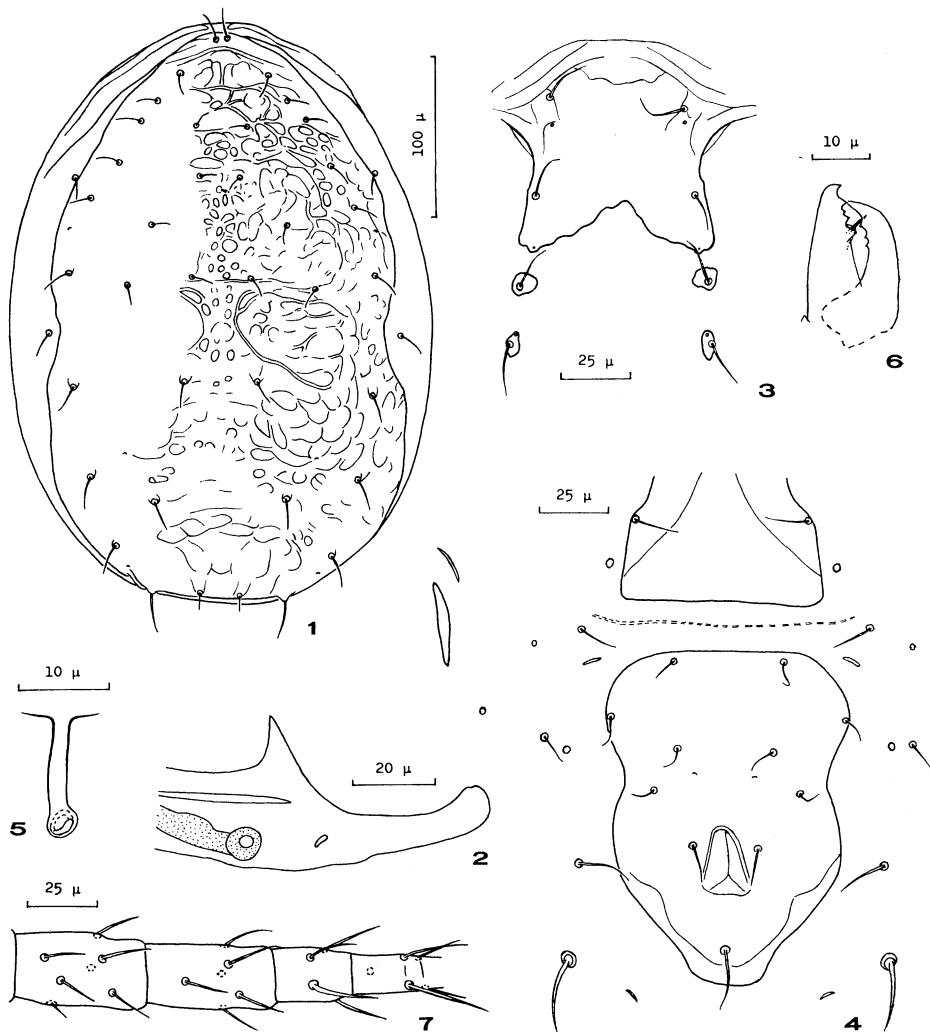
Mites belonging to the subgenus *Paraseiulus* MUMA included in the genus *Typhlodromus* SCHEUTEN are characterized by having three pairs of median setae, two on the proscutum, and one on the postscutum. No representatives of *Paraseiulus* have been recorded from Japan. In the present paper a new species of this subgenus is described from Tottori Prefecture, Honshu. Further, notes are here given on four other species of Phytoseiidae from Japan.

Typhlodromus (Paraseiulus) yokogawae EHARA et HAMAOKA, n. sp. (Japanese name: Kebuka-kaburidani)

(Figs. 1-7)

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Figs. 1-7. *Typhlodromus (Paraseiulus) yokogawae* EHARA et HAMAOKA, n. sp. (♀). 1: dorsum of idiosoma. 2: peritrematal shield. 3: sternal shield. 4: posterior ventral surface. 5: spermatheca. 6: chelicera. 7: genu, tibia and basitarsus of leg IV.

Female. Dorsal shield rugose, with at least three pairs of pores. Setae on dorsal shield set on tubercles, the posterior tubercles conspicuous; L_{10} with minute barbs, remaining setae smooth. Setae S_1 and S_2 on interscutal membrane. Peritreme extending about anterior to seta D_1 ; peritrematal shield without pos-

terior transverse suture, with caudal end narrow. Sternal shield with posterior margin strongly concave, with two pairs of setae; third pair of sternal setae on roundish platelets; metasternal platelets longer than wide. Ventrianal shield longer than wide, wider than genital shield, with lateral margins concave; four pairs of preanal setae; a pair of minute pores between and behind caudomedian pair of preanals. Two pairs of very slender metapodal platelets. Spermatheca with cervix slender, subparallel-sided. Chelicera with four teeth on fixed digit and three teeth on movable digit. Chaetotaxic formula: genu II, 2-2/0, 2/0-1; genu III, 1-2/0, 2/0-1. Leg IV with two macrosetae, basitarsus and distitarsus. Measurements in micra: idiosoma length 350, idiosoma width 240; lengths of setae: L₁ 15, L₂ 14, L₃ 16, L₄ 16, L₅ 17, L₆ 19, L₇ 19, L₈ 21, L₉ 21, L₁₀ 27, M₁ 13, M₂ 15, M₃ 21, D₁ 19, D₂ 12, D₃ 12, D₄ 13, D₅ 17, D₆ 12, S₁ 17, S₂ 17, VL₁ 23, macrosetae on leg IV: basitarsus 21, distitarsus 27.

Male. Not known.

Type-series. Holotype: ♀, Kyūshōzan, Tottori City, 18-V-1974 (S. EHARA, M. YOKOGAWA & S. YAMANO), on bamboo. Paratype: 1 ♀, Entsūji, Tottori City, 18-IX-1976 (K. HAMAOKA), on *Polygonum thunbergii* SIEB. et ZUCC. The type-series is deposited in the Biological Institute, Faculty of Education, Tottori University.

Remarks. This new species is similar to *Typhlodromus (Paraseiulus) vitreus*¹⁾ CHAUDHRI, 1974 (Pakistan), but the former differs from the latter in the shape of the ventrianal shield and of the chelicerae, and in the relative lengths of the setae on basitarsus IV. The new species is named in honor of Mrs. Mitsue KOBAYASHI (formerly Miss M. YOKOGAWA).

Typhlodromus (Anthoseius) insularis EHARA

Typhlodromus (Neoseiulus) insularis EHARA, 1966, p. 10, Figs. 1-6.

Typhlodromus (Anthoseius) insularis: EHARA, 1967b, p. 212; EHARA, 1972, p. 138, Figs. 75-76.

Typhlodromus insularis was previously known from Shikoku and Kyushu.²⁾ This species is recorded for the first time from Honshu.

Collection record. One ♀, Wanami, Kawabara, Tottori Pref., 15-IX-1976 (K. HAMAOKA), on *Sasa japonica* (SIEB. et ZUCC.) MAKINO.

1) New combination; originally described as *Paraseiulus vitreus*.

2) According to GUPTA (1970), it also occurs in West Bengal, India.

Amblyseius (Amblyseius) makuwa EHARA

(Fig. 8)

Amblyseius (Amblyseius) makuwa EHARA, 1972, p. 154, Figs. 70-74.

Amblyseius makuwa has hitherto been known only from a single female taken on *Cucumis melo* L. var. *makuwa* MAKINO in Oita Prefecture, Kyushu. This species is recorded from Honshu for the first time. The fixed digit of the female chelicera has four or five teeth; the movable digit is unidentate.

Collection record. Two ♀♀, Tokuyoshi, Kawabara, Tottori Pref., 15-IX-1976 (K. HAMAOKA), on *Kummerovia striata* (THUNB.) SCHINDLER.

Amblyseius (Amblyseius) okinawanus EHARA

(Fig. 9-11)

Amblyseius (Amblyseius) okinawanus EHARA, 1967a, p. 72, Figs. 17-24; LO, 1970, p. 56, Figs. 22-27; EHARA & LEE, 1971, p. 64, Fig. 8; EHARA, 1972, p. 156; TSENG, 1976, p. 115, Figs. 55-58; EHARA & BHANDHFALCK, 1977, p. 58.

Amblyseius okinawanus was recorded from Kyushu, Okinawa Island, Taiwan, Hong Kong, and Thailand. This species is recorded from Honshu for the first time.

Collection records. Two ♀♀, Yasunaga, Tottori City, 21-VIII-1976 (K. HAMAOKA), on willow; 1♀, Yasunaga, Tottori City, 29-VIII-1976 (K. HAMAOKA), on *Paederia scandens* var. *mairei* (LÉVEILLÉ) HARA; 1♂, left shore of the Sendai River between Sendai-bashi and Yachiyo-bashi, Tottori City, 2-IX-1976 (K. HAMAOKA), on *Chenopodium ambrosioides* L.; 1♀, Hattori, Tottori City, 5-IX-1976 (K. HAMAOKA), on willow; 1♂, Hattori, Tottori City, 5-IX-1976 (K. HAMAOKA), on *Lythrum anceps* (KOEHNE) MAKINO.

Okiseius subtropicus EHARA

(Fig. 12)

Okiseius subtropicus EHARA, 1967a, p. 77, Figs. 36-39.

Platyseiella (Noeledius) subtropicus: TSENG, 1976, p. 102, Figs. 33-37.

Previously *Okiseius subtropicus* was recorded from Okinawa Island and Taiwan. This species is recorded from Honshu for the first time. The cervix of the spermatheca is broader than long, thick-walled; the atrium is conspicuous,

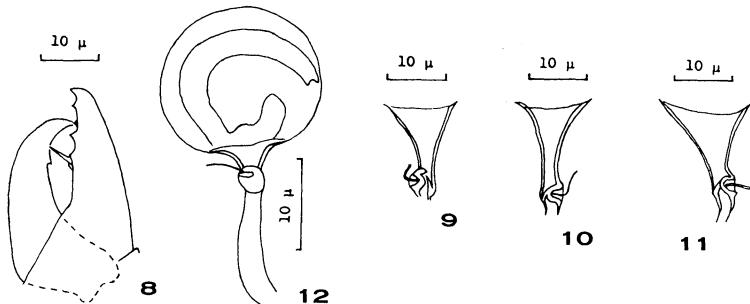


Fig. 8. *Amblyseius (Amblyseius) makuwa*, chelicera (φ). Figs. 9-11. *Amblyseius (Amblyseius) okinawanus*, spermatheca (9: Okinawa Island, on *Verbena officinalis* L.; 10: Kyushu, on citrus; 11: Honshu, on willow). Fig. 12. *Okiseius subtropicus*, spermatheca.

the major duct is broad. Chaetotaxic formula (φ): genu II, 1-2/0, 2/0-1; genu III, 1-2/1, 2/0-1.

Okiseius EHARA, 1967, was synonymized with *Noeledius* MUMA and DENMARK, 1968, by TSENG (1976) who was also of opinion that the latter is a subgenus of *Platyseiella* MUMA, 1961. If *Okiseius* and *Noeledius* were synonymous, *Noeledius* would be a junior synonym of *Okiseius*, according to the law of priority. *Noeledius* is, however, quite distinctive from *Okiseius* in having the dorsal shield with lateral marginal portions curving ventrally, and the postscutum with five pairs instead of four pairs of lateral setae, and in the genual chaetotaxy of leg II. In addition, *Platyseiella* is distinct from *Okiseius* in having four pairs of prolateral setae and two pairs of postlateral setae, and in the genual chaetotaxy of legs.

Collection record. One φ , Ichinose, Chizu, Tottori Pref., 24-IX-1976 (K. HAMAOKA), on *Mallotus japonicus* (THUNB.) MUELL. ARG.

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摘要

江原昭三・浜岡圭子(鳥取大学教育学部生物学教室): 日本産 *Typhlodromus* の 1 新種の記載
および他 4 種のカブリダニのノート

Typhlodromus (Paraseiulus) yokogawae EHARA et HAMAOKA, n. sp. (ケブカカブリダニ) が本州（鳥取県）から記載された。*Paraseiulus* 亜属は、わが国から初めて記録されるものである。

また、*Typhlodromus (Anthoseius) insularis* EHARA, *Amblyseius (Amblyseius) makuwa* EHARA, A. (A.) *okinawanus* EHARA, および *Okiseius subtropicus* EHARA が本州から初めて記録された。

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